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COMMANDERS DIGEST
VOL. 19, NO. 24/NOVEMBER 25, 1976

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Nuclear Non-Proliferation: U.S. DEFENSE POLICY TODAY

Why DoD Supports NUCLEAR NON-PROLIFERATION

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Since 1945, six nations have acquired and demonstrated nuclear explosive capabilities. Two, the Soviet Union and the United States, have since the late 1940s acquired awesome military nuclear forces which are still undergoing further development and modernization. Two others, the United Kingdom and France, have since the early 1950s acquired significant nuclear forces and continue modest modernization of their capabilities. The People's Republic of China has pursued a significant weapons program since 1964. Its force development in terms of long-range delivery capabilities has progressed at a slower pace than originally anticipated.

The last known nuclear nation, India, exploded a nuclear device of about 10-15 kilotons in May 1974. It was characterized by the Indian Government as a peaceful nuclear explosive. Since that time, no known military applications program has been observed in India.

One conclusion to be drawn from this short 31-year history is that military nuclear proliferation has been much slower than predicted in the early nuclear days. A second is that a number of high technology countries have not pursued a nuclear explosive capability, although they could have. The reasons for this wise restraint may be of value to other nations contemplating development of nuclear explosives or weapons. It is a long, expensive and continuing task to achieve and keep a meaningful strategic nuclear power status. For our allies and friends around the world, it is also unnecessary, given the U.S. nuclear guarantee and mutual defense commitments.

But now we have a more serious proliferation potential. That is the prospect that the most inhibiting factor in developing nuclear weapons—the heretofore limited availability of plutonium—may be lost. This could be the result of world expansion in numbers of nuclear power and, to some extent, research reactors and the possible spread of nuclear fuels and reprocessing facilities. Thus, there is a potential for great increase in the numbers of countries which might opt for a nuclear weapons capability, primitive though it may be, as a result of easier access to plutonium or highly enriched uranium.

What is the Department of Defense interest in proliferation? Deputy Secretary of Defense Robert Ellsworth, then Assistant Secretary for International Security Affairs, testified before the Senate Foreign Relations Committee in October 1975. He said, in part:

". . .The sobering prospect of a further proliferated world is of great concern to the Department of Defense which is charged with the responsibility of ensuring our national security. The impact on U.S. security depends upon both where and when nuclear proliferation occurs. . . ."

". . .Furthermore, providing deterrence against an increased number of nuclear equipped adversaries would require larger Defense expenditures than are required today. . . ."

". . .Another aspect . . . is the increased threat of nuclear terrorism or outlawry . . . * * * . . . for terrorists and other outlaw groups to obtain access to nuclear weapons or to the materials required to build them. . . ."

The *Non-Proliferation Treaty* was reviewed in Geneva in May 1975. Although almost 100 states are parties, the treaty still is not adhered to by three nuclear weapons states (China, France, India) and several high-technology states (Israel, Switzerland, Spain, Argentina, Brazil, South Africa). The Defense Department notes with concern that policy analyses conclude that proliferation cannot be halted, but may only be impeded. We must look carefully at what can be done in the near and far terms to make this conclusion more hopeful for control of proliferation.

To aid in controlling proliferation, the Defense Department strongly supports:

- strengthening and supporting the Non-Proliferation Treaty;

- reducing the possibility of nuclear material or weapons diversion by terrorist groups;
- achieving agreement on export safeguards between major nuclear supplier countries;
- inhibiting acquisition of national reprocessing facilities.

Defense has taken some actions to mitigate some of these problems and is participating in the U.S. interagency areas dealing with safeguards and export controls. Some specifics are:

- Diversion of nuclear material or weapons by terrorist groups has been of prime concern to both the Energy Research and Development Administration (ERDA) and DoD. Security procedures, protective measures and weapon design features to deal with this possibility are in large part classified. The details have been provided to the Congress through classified channels to the Joint Committee on Atomic Energy.
- After consultation with some other nuclear exporting countries, the U.S. Government has decided that there should be:

(1) no use of exported material for weapons or Peaceful Nuclear Explosions;
(2) International Atomic Energy Agency safeguards on exported and re-exported materials and technology;
(3) special constraints on enrichment, reprocessing and weapons-useable nuclear materials, adequate physical security requirements for transferred items;
(4) special controls on exports to sensitive regions.

These guidelines may help deter proliferation by removing, to some extent, commercial competition as a proliferation factor.

Key Element

The ultimate control of proliferation lies in the control of special nuclear materials—plutonium and highly enriched uranium. In addition to export practices, the reprocessing of material is a key element.

A country that possesses the capability for reprocessing spent fuel from power reactors also possesses a latent capability to use plutonium by-product in nuclear weapons. A country that has a reprocessing capability and the technical expertise to develop and manufacture the required associated components could develop the non-nuclear components of nuclear weapons to an advanced state; final assembly to include the special nuclear materials could be accomplished in a short time—days to weeks. Thus, the key element is the control of reprocessing facilities, with their inevitable by-product of readily separable plutonium. The Department of Defense supports efforts to establish strong controls to inhibit national reprocessing facilities.

Disincentives

How can the United States, through the Defense Department, provide greater disincentives to nuclear weapons proliferation? Mutual defense arrangements with our friends and allies around the world provide the basis for U.S. forward deployed conventional and nuclear defensive forces to act as a deterrent to aggression. In particular, the U.S. nuclear umbrella in NATO and the Western Pacific obviates the necessity for high technology non-nuclear states to resort to independent nuclear forces.

Should the United States withdraw nuclear weapons or conventional forces from overseas locations, or otherwise break our agreements, some of these allied nations might seek a capability to acquire nuclear weapons. Even today, it is conceivable that some western-aligned nations have undertaken such precautions, as a result of a perceived wavering U.S. resolve to uphold its worldwide commitments. Therefore, the Department of Defense underscores the importance that nuclear capable forces of the United States and its allies make to national defense, to world stability, and to nonproliferation of nuclear weapons. Those who advocate that the United States withdraw nuclear weapons from overseas should consider the possible consequences of increasing nuclear proliferation incentives of some of these nations. The spread to allied and otherwise aligned countries of the capability to build and deliver nuclear weapons can only reduce the

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Donald R. Cotter, a native of Pennsylvania, was designated Assistant to the Secretary of Defense (Atomic Energy) and Chairman, Military Liaison Committee to the Energy Research and Development Administration (previously the Atomic Energy Commission), on Oct. 16, 1973.

In this position he is responsible to the Secretary of Defense for developing DoD requirements for research, development and production of nuclear weapons. He also assists the Secretary on policy matters involving safety and security of nuclear weapons and their deployment and employment.

Until 1966, Cotter held a number of positions at the Atomic Energy Commission's Sandia Laboratory in Albuquerque, N.M., including Systems Planning Director, Advanced Systems Research Director, and manager of the Systems Engineering Department.

He then joined the Department of Defense, as special assistant for counterinsurgency and then became special assistant for Southeast Asia matters in the Office of the Director of Defense Research and Engineering.

Cotter became Director of the Overseas Defense Research Office of the Advanced Research Projects Agency (ARPA) in February 1970, and was named deputy director of the agency in August 1971. He held that position until July 1972, when he was appointed director of the Atomic Energy Commission's Division of International Security Affairs. In this position he was a member of the U.S. Intelligence Board.

In February 1973, he was named special assistant to the Director of Central Intelligence.

He studied industrial and electrical engineering at Lehigh University and mathematics and physics at the University of New Mexico.

Cotter was awarded the Secretary of Defense Civilian Meritorious Service Award in July 1968 for contributions to military technology in Southeast Asia. He received the award again in July 1972—this time for technical contributions to ARPA's strategic and tactical technology programs. He was awarded the DoD Distinguished Public Service Award in November 1975, for broadening the range of nuclear options, modernizing and improving nuclear forces, and improving their safety and security.

possibility for meaningful international arms control agreements.

We believe that a major DoD role is in assisting nonproliferation by influencing security perceptions of non-nuclear friends and allies. This would inhibit nuclear weapons proliferation primarily through constraining nations from developing an indigenous nuclear explosive capability. A nation that has the capability to produce nuclear weapons may be dissuaded from that act by perceiving that its own security is not in jeopardy.

History shows that even after a nation achieves the capability to detonate nuclear devices it takes a long time to achieve a true military capability. However, there is enormous opportunity for mischief and disaster if even a primitive nuclear explosives capability falls into certain hands. We must avoid that by meaningful safeguards over special nuclear materials. We must also use what time we have to seek longer term solutions. Some may be available through technology of alternative fuel cycles and designs of reactors to minimize diversion possibilities. Other incentives would include:

- improving our "watch" capability for troublesome countries or areas to give more warning time,
- being prepared to satisfy the needs of underdeveloped countries desiring peaceful nuclear explosives services as guaranteed in the Non-Proliferation Treaty, and
- better protection of information which, if disclosed, would have an adverse effect on U.S. non-proliferation goals.

COMMANDERS DIGEST

Vol. 19, No. 24, November 25, 1976

A publication of the Department of Defense to provide official and professional information to commanders and key personnel on matters related to Defense policies, programs and interests, and to create better understanding and teamwork within the Department of Defense.

Published bi-weekly by the American Forces Press Service, 1117 N. 19th St., Arlington, Va. 22209, a unified activity of the Office of Information for the Armed Forces, OASD (PA). Reproduction of content is authorized.

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